

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 193-221 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al (5,658,860) alone, or in combination with Chesser et al (6,403,537).

Applicants' arguments filed 23 September 2008 have been fully considered but they are not persuasive. As previously set forth, Clark et al ["Clark"] disclose a well fluid emulsion having a water phase and an oil phase of a sulfurized alcohol and a naturally occurring fat, oil or derivatives thereof. Also disclosed is a method of lubricating drilling equipment used in conjunction with the drilling. Suitable naturally occurring fats and oils may be obtained from vegetable oils such as castor oil, coconut oil, corn oil, cottonseed oil, olive oil and sunflower oil. The preferred class of alcohols are glycols and polyglycols having a molecular weight in the range of about 200 to about 2000. See column 3, line 39 to column 4, line 21. Suitable fatty acids include those having a carbon chain length of 8-30 carbon atoms. Clark teaches that derivatives of the fatty acids may be used including alkali metal derivatives. See column 5, lines 37-58. The examiner maintains the position that the drilling fluid of Clark clearly meets the limitations of most of the above rejected claims. Applicants' invention differs in some independent and dependent claims by adding one or more monomers comprising acrylamide. However, Chesser et al ["Chesser"] is added to teach that drilling fluid systems conventionally contain acrylamide monomers. Having the prior art references before the inventors at the time

the invention was made it would have been obvious to have added the acrylamide monomers of Chesser to the drilling fluids of Clark if the known imparted properties were so desired. It is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, here as drilling fluids, in order to form a third composition to be used for the very same purpose.... “[T]he idea of combining them flows logically from their having been individually taught in the prior art.” *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

Applicants amended the independent claims to clarify that the method provides a drilling fluid system comprising a continuous phase comprising as an integral component a dispersion comprising a quantity of insoluble fatty acid soap particles and argued that the examiner has not established that insoluble low valence fatty acid soap particles were known to be useful in drilling fluid systems for any particular purpose. This is not deemed to be persuasive because it is not clear that the “insoluble fatty acid soap particles comprising alkali metal selected from the group consisting of lithium, potassium, rubidium, cesium, and combinations thereof” of the claims differ from the prior art to Clark. It has been established that patent claims are read in the light of the specification, and applicants teach in the specification on pages 5-6 that the “fatty acid in the metal soap comprises saturated or unsaturated monocarboxylic acid compounds having the following general structure:



wherein R is selected from the group consisting of alkyl groups and alkenyl groups having from about 10 to about 28 carbon atoms, preferably from about 16 to about 24 carbon atoms”. And that “examples of suitable fatty acids include, but are not necessarily limited to tall oil fatty

acids, stearic acids, palmitic acids, oleic acids, and fatty acids derived from castor oil, coconut oil, cotton-seed oil, rice oil, soybean oil, lard oil, rosin acids, tall oils, and the like, and combinations thereof.” As set forth above, Clark teaches that the well fluid emulsion comprises a naturally occurring fat, oil or derivatives thereof, and that suitable naturally occurring fats and oils may be obtained from vegetable oils such as castor oil, coconut oil, corn oil, cottonseed oil, olive oil and sunflower oil. Clark also teaches that suitable fatty acids include those having a carbon chain length of 8-30 carbon atoms, preferably a carbon chain length in the range of about 14 to about 22 carbon atoms, and that derivatives of the fatty acids include alkali metal derivatives. So the examiner maintains the position that the alkali metal derivatives of fatty acids of the prior art reference to Clark meet the limitations of the alkali metal fatty acid soap component of the claims. Although the fatty acid component of Clark is not taught as “insoluble”, the components of the invention and of Clark are seen to be the same so the fatty acids of Clark must also be insoluble.

Applicants argue that the examiner has not pointed to any teaching or suggestion that a dispersion of the claimed insoluble low valence fatty acid soap particles would remain thermally stable at increased temperatures of 250°F (121°C), 300°F (148°C), or even 450°F (232°C) as set forth in the dependent claims. Applicants argue that the examiner has also not pointed to a teaching that the claimed insoluble low valence fatty acid soap particles would react with metal surfaces under appropriate conditions. This is not deemed to be persuasive because the claimed insoluble low valence (meaning alkali metal) fatty acid soap particles of the claims are seen to be indistinguishable from the fatty acid component disclosed in Clark, and Clark also teaches their use as additives to drilling fluids where, during operation in a subterranean well, drilling

temperatures presumably reach the same claimed high temperatures. And, as previously set forth, Clark claims in claim 1 that the drilling fluid is contacted with the surface of the drilling equipment “to provide an interface on the equipment surface”.

In regards to the combination of Clark and Chessler, applicants also argue that the examiner has not established that the claims are directed merely to the predictable use of prior art elements according to their established functions; nor has the examiner established an apparent reason to combine known elements in the fashion claimed. As previously set forth, Clark teaches drilling fluid compositions and Chessler teaches drilling fluid compositions. It has been held that it is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, here as drilling fluids, in order to form a third composition to be used for the very same purpose, here as drilling fluids. As recently instructed by the Supreme Court, when a claim defines a combination of elements known in the prior art, the combination must do more than yield a predictable result. *KSR Int'l. Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1740 (2007). Thus the examiner is of the position that it is applicants burden of proof to demonstrate that a drilling fluid composition containing both the alkali metal fatty acid soap of Clark and the acrylamide monomers of Chessler does more than yield the predictable result of a drilling fluid composition containing the attendant functions of each additive.

Applicants also argue that the new claims are directed to a method of providing extreme pressure lubrication of drilling equipment during drilling operations which differs from Clark which teaches friction reduction. This is not deemed to be persuasive because the claimed additives are seen to be the same as Clark and Chessler and the method of use as a drilling fluid is seen to be the same as Clark and Chessler. It has been held that the discovery of a previously

unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer. *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999). Thus the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. *In re Best*, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977).

THIS ACTION IS MADE FINAL. Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen M. McAvoy whose telephone number is (571) 272-1451. The examiner can normally be reached on M-F (7:30-5:00) with alt. Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ellen M McAvoy/

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Art Unit 1797

EMcAvoy
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